

REMARKS

Claims 1-12 are pending in this application. Claims 1-12 are independent. In light of the remarks made herein, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections.

In the outstanding Official Action, the Examiner rejected claims 1-12 under 35 U.S.C. § 103 as being unpatentable over *Susai et al.* (USP 6,411,986) in view of *Heller, III* (USP 4,652,915). Applicants respectfully traverse this rejection.

Claim Rejections - 35 U.S.C. § 103

In support of the Examiner's rejection of claim 1, the Examiner asserts that *Susai et al.* teaches obtaining at least one of an amount of transmitted segment at a side which sent the detected SYN segment (citing to a detected GET packet and col. 7, lines 5-30) and an amount of transmitted bytes at the side (citing to SYN flag and GET segment length, and col. 8, lines 5-65) wherein the amount of transmitted segment being obtained by counting a total amount of the detected DATA segment and the amount of transmitted bytes being obtained by calculating a difference between a sequence number of the first detected DATA segment (citing to the length of data, and col. 8, lines 1-5) and a sum of a sequence number of the last detected DATA segment and a user data length of the last detected DATA segment (citing to the calculated

sequence number and checksum, and the last byte of data, and further citing to col. 5, lines 7-20 and col. 6, lines 31-52).

The Examiner admits that *Susai et al.* does not explicitly teach the calculation using the first and last segment and counting the amount of the segment. The Examiner asserts that this element is well known, citing to the teachings of *Heller*, namely First ACK, Last ACK, and the counter, and col. 5, lines 1-59 and col. 6, lines 30-48. Applicants respectfully disagree with these characterizations.

In order to sustain a rejection under 35 U.S.C. § 103(a), it is respectfully submitted that the Examiner must meet his burden to establish a *prima facie* case. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations." *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The disclosure of *Susai et al.* is directed to an Internet client-server multiplexer. The apparatus is implemented within an interface unit connecting a plurality of servers to the Internet which is connected to a plurality of clients. The interface unit

opens and maintains connections with the servers and handles the opening and closing of connections with clients accessing the servers, thereby freeing the servers of the processing load incurred by opening and closing connections. The interface unit further examines the path names within requests received from clients and selects the server hosting the requested information according to the path names. (Abstract).

Susai et al. defines a segment as including a TCP header and data. The sequence number identifies the byte in the string of data from the sending TCP to the receiving TCP that the first byte of data in the segment represents. Since every byte that is exchanged is numbered, the acknowledgement number contains the next sequence number that the sender of the acknowledgement expects to receive. This is therefore the sequence number plus one of the last successfully received byte of data. The checksum covers the TCP segment, i.e., the TCP header and the TCP data. This is a mandatory field that must be calculated and stored by the sender and then verified by the receiver. (Col. 5, lines 7-20).

Figs. 6A and 6B provide flow diagrams illustrating the translations of acknowledgement and sequence numbers. The label for each flow in Figs. 6A and 6B is in the form of T:S,A(L) where T represents a TCP segment type, S is the sequence number, A is the acknowledgement number, and L is the length parameter. The length parameter describes the number of bytes of data in the TCP segment.

(Col. 7, line 62 - col. 8, line 4). As can be seen in line 604, the segment sent from client C1 identifies the length parameter as 49.

In contrast, the present invention as set forth in claim 1 recites, *inter alia*, a method for collecting statistical traffic data comprising obtaining at least one of an amount of transmitted segment at a side which sent the detected SYN segment, and an amount of transmitted bytes at the side; wherein the amount of transmitted segment being obtained by counting a total amount of the detected DATA segment, and the amount of transmitted bytes being obtained by calculating a difference between a sequence number of the first detected DATA segment, and a sum of a sequence number of the last detected DATA segment and a user DATA length of the last detected DATA segment.

As noted above, the sequence number, the acknowledgement number, and the length parameter are all identified at client C1. There is no teaching or suggestion in *Susai et al.* that is directed to the amount of transmitted segment being obtained by counting a total amount of the detected DATA segment, nor is there any teaching or suggestion in *Susai et al.* that is directed to the amount of transmitted bytes being obtained by calculating a difference between a sequence number of the first detected DATA segment and a sum of a sequence number of the last detected DATA segment and a user length of the last detected DATA segment. In fact, there is no teaching or suggestion in *Susai et al.* that is

directed to detecting any DATA segment. Interface unit 202 multiplexes based upon manipulating the sequence and acknowledgement numbers (col. 7, lines 30-31).

Heller fails to cure the deficiencies of the teachings of *Susai et al.* contrary to the Examiner's assertions. The disclosure of *Heller* is directed to a method for polling headphones of a passive TV audience meter system. As identified throughout the disclosure of *Heller*, the headphones merely transmit an ACK signal that identifies that the headphones are in use. There is no transmission of DATA segments from the headphones. As no DATA segments are transmitted from the headphones, there can be no detection of DATA segments. As such, it is respectfully submitted that *Heller* fails to cure the deficiencies of the teachings of *Susai et al.*, assuming these references are combinable. As such, it is respectfully submitted that the Examiner has failed to establish *prima facie* obviousness by failing to provide references that teach or suggest all of the claim elements. As such, it is respectfully requested that the outstanding rejection be withdrawn.

It is respectfully submitted that claim 2 contains elements similar to those discussed above with regard to claim 1, and thus claim 2 is allowable for the reasons set forth above with regard to claim 1.

In support of the Examiner's rejection of claim 3, the Examiner, curiously, relies on the same teachings asserted with

regard to claim 1 in support of his rejection of claim 3. However, the invention as set forth in claim 3 recites, *inter alia*, a method for collecting statistical traffic data comprising detecting a SYN segment from a traffic in one of two directions on the Internet line; detecting an ACK segment and a DATA segment each of which belongs to the same connection as the detected SYN segment from the traffic; and calculating, as an amount of received data at a side which sent the detected SYN segment, a difference between the acknowledgement number of the first detected ACK segment or DATA segment and an acknowledgement number of the last detected ACK segment or DATA segment.

As noted above, there is no teaching or suggestion in *Susai et al.* that is directed to detecting or manipulating DATA segments. Further, as communication progresses between, for example, client 1 through interface unit 202 and server S, the acknowledgement number is incremented. However, there is no teaching or suggestion of utilizing the ACK segments to determine the amount of received data. Further, there is no teaching or suggestion in *Susai et al.* that is directed to calculating, as an amount of received data at a side which sent the detected SYN segment, a difference between the acknowledgement number of the first detected ACK segment or DATA segment and an acknowledgement number of the last detected ACK segment or DATA segment.

For the reasons set forth above with regard to claim 1, *Heller* fails to cure the deficiencies of the teachings of *Susai et al.* As neither of the references, either alone or in combination, assuming these references are combinable, which Applicants do not admit, teach or suggest all of the claimed elements, it is respectfully submitted that claim 3 is not obvious over the combination of references as cited by the Examiner.

It is respectfully submitted that claim 4 contains elements similar to those discussed above with regard to claim 3, and thus claim 4 is not obvious over the references as cited for the reasons set forth above with regard to claim 3.

In support of the Examiner's rejection of claims 5 and 6, the Examiner asserts that these claims contain elements similar to those set forth in claims 1 and 2. The Examiner relies on his rejection of claims 5 and 6 for his reasoning set forth in claims 1 and 2.

Applicants respectfully submit that claims 5 and 6 contain elements that are not incorporated in claims 1 or 2. For example, claim 5 recites, *inter alia*, a method for collecting statistical traffic data comprising judging, at every detection of the DATA segment, whether a sequence number of the newly detected DATA segment is less than the determined sequence number at the last DATA segment detection; and obtaining, when the sequence number of the newly detected DATA segment is less than the determined

sequence number, at least one of a new amount of re-transmitted segment at a side which sent the detected SYN segment, and a new amount of re-transmitted bytes at the side. It is respectfully submitted that there is no judging step as recited in claim 5 in either claim 1 or claim 2. As such, Applicants cannot ascertain what portions of the references the Examiner is relying upon to teach or suggest the judging step or the obtaining step as set forth in claim 5. Additionally, claim 6 includes a judging and an obtaining step and, as such, it is unclear which portions of the references the Examiner is relying upon to teach these claim elements. Should the Examiner maintain his rejection of these claims, Applicants respectfully request a detailed explanation of the Examiner's support including a *prima facie* case under 35 U.S.C. § 103 in a non-final Official Action.

In addition to the above, Applicants maintain that claims 5 and 6 are not anticipated by the references as cited. As both claims 5 and 6 incorporate detecting DATA segments, as noted above, neither of the references teach or suggest this claim element. As such, claims 5 and 6 are not obvious over the references as cited.

With regard to the Examiner's rejection of claim 7, the Examiner asserts that *Susai et al.* teaches the obtaining step as set forth in the claim referring to the next sequence number being a sequence number plus one, citing to col. 5, lines 8-20. Applicants disagree with the Examiner's characterization of this reference.

At col. 5, lines 8-20, *Susai et al.* teaches

The TCP portion of the packet is referred to as a segment. A segment includes a TCP header and data. The sequence number identifies the byte in the string of data from the sending TCP to the receiving TCP that the first byte of data in the segment represents. Since every byte that is exchanged is numbered, the acknowledgment number contains the next sequence number that the sender of the acknowledgment expects to receive. This is therefore the sequence number plus one of the last successfully received byte of data. The checksum covers the TCP segment, i.e., the TCP header and the TCP data. This is a mandatory field that must be calculated and stored by the sender, and then verified by the receiver.

Susai et al. teaches at the citation above that the acknowledgement number includes the sequence number plus one of the last successfully received byte of data.

In contrast, the present invention as set forth in claim 7 recites, *inter alia*, a method for collecting statistical traffic data comprising obtaining, when both of the acknowledgment number and the window size of the newly detected two or more ACK segments are equal to the determined acknowledgment number and the determined window size, a new amount of missing DATA segment at a side which sent the detected SYN segments, by adding 1 to the last obtained amount of missing DATA segment. As noted above, *Susai et al.* teaches adjusting the acknowledgement number, not the last amount of missing DATA segment as recited in the claim. As such, *Susai et al.* fails to teach or suggest this claim element. As *Heller* fails to teach or suggest transmitting any DATA segments, *Heller* fails to cure the deficiencies of the teachings of *Susai et al.* As neither of the references, either alone or in combination, teach or suggest this claim element, it is respectfully submitted

that claim 7 is not obvious over the references as cited by the Examiner.

It is respectfully submitted that claim 8 includes a similar recitation as to that cited above with regard to claim 7, and thus claim 8 is not obvious over the references as cited for the reasons set forth above with regard to claim 7.

In support of the Examiner's rejection of claim 9, the Examiner asserts that *Susai et al.* teaches obtaining at least one of an HTTP response time at a side which sent the detected SYN segment and an HTTP throughput at the side, asserting *Susai et al.* teaches reusing the server connection or HTTP connection, citing to col. 6, line 63 - col. 7, line 29. The Examiner further asserts that *Susai et al.* teaches wherein the HTTP response time being obtained by calculating a time difference from the last detection of the DATA segment to the first detection of the ACK segment and the HTTP throughput being obtained by calculating a ratio of a difference between an acknowledgement number of the first detected ACK segment and an acknowledgement of the last detected ACK segment, to a time difference from the first detection of the ACK segment to the last detection of the ACK segment, citing to *Susai et al.*'s teachings of calculating a sequence number and checksum and col. 5, lines 7-20 and col. 6, lines 31-52. Applicants respectfully disagree with the Examiner's characterization of this reference.

Applicants maintain that *Susai et al.*'s teachings of calculating a sequence number and a checksum are insufficient to teach or suggest an HTTP response time being calculated based upon

a time difference from the detection of the last DATA segment to the first detection of the ACK segment. As noted above, *Susai et al.* does not utilize any detection of a DATA segment. Further, there is no discussion in *Susai et al.* that is directed to an HTTP response time. Further, there is no discussion of calculating a ratio of a difference as recited in the claims. Applicants are unclear as to what specific teachings the Examiner is relying upon to teach or suggest this claim element. In the event that the Examiner maintains his rejection of this claim using the cited references, Applicants respectfully request that the Examiner detail those portions of the reference the Examiner is relying upon to teach or suggest all of the claim elements in a non-final Official Action.

As claim 10 contains elements similar to those discussed above with regard to claim 9, it is respectfully submitted that claim 10 is not obvious over the references as cited for the reasons set forth above with regard to claim 9.

With regard to the Examiner's rejection of claim 11, the Examiner asserts that *Susai et al.* teaches the calculating step, citing to the same references the Examiner relied upon in teaching the calculating step as set forth in claim 9. However, it is respectfully submitted that claim 11 recites, *inter alia*, a method for collecting statistical traffic data comprising calculating, as an FTP throughput at a side which sent the detected SYN+ACK segment, a ratio of a difference, between an acknowledgement number of the first detected ACK segment and an acknowledgement number of the last detected ACK segment, to a time difference from the first

detection of the ACK segment to the last detection of the ACK segment.

It is respectfully submitted that the Examiner's citations to the *Susai et al.* reference are insufficient to teach, and do not even mention, calculating, as an FTP throughput, a ratio of a difference as recited in claim 10. As the Applicants are unclear which portions of the reference the Examiner is relying upon to teach or suggest this claim element, should the Examiner maintain this rejection, Applicants respectfully request that the Examiner provide a detailed explanation outlining a *prima facie* case of obviousness under 35 U.S.C. § 103 in a new, non-final Official Action.

It is respectfully submitted that claim 12 contains elements similar to those discussed above with regard to claim 11, and thus claim 12 is not obvious for the reasons set forth above with regard to claim 11.

Additional Comments

On June 29, 2001, Applicants filed an Information Disclosure Statement. To date, Applicants have not received a signed copy of the Form PTO-1449. Applicants respectfully request consideration of the documents contained in the Information Disclosure Statement.

Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Catherine M. Voisinet (Reg. No. 52,327) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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